

PATENT

Attorney Docket: AR218X
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TECH CENTER 1600/2900

In re Application of
HAMILTON, NORMAN, WU
Serial No. 09/204,236
Filed: December 3, 1998



Examiner: Celia Chang
Group: 1612

For: N-LINKED SULFONAMIDES OF HETEROCYCLIC CARBOXYLIC ACIDS OR
CARBOXYLIC ACID ISOSTERES

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to Applicants' duty of disclosure under 37 C.F.R. §§1.56 and 1.97-1.99, the documents listed on the attached Form PTO-1449 are being brought to the attention of the Examiner in charge of the captioned application. No fee is included with this submission, because it is submitted before an Official Action on the merits has been mailed by the U.S. Patent and Trademark Office. Copies of the documents are attached herewith.

This second supplemental IDS cites references which are relevant to the proviso species of claim 1. For the Examiner's convenience, a copy of the provisos from claim 1 follow, wherein the relevant Form PTO-1449 reference numbers [e.g. AC, BG, etc.] are included in parentheses after the corresponding proviso species.

Proviso from claim 1:

A. provided that:

when D is a bond, and R₂ is COOH,

then R_1 cannot be substituted naphthyl [DO, EG, FH];

B. further provided that:

when D is a bond, and n is 1, and R_2 is COOH or CONHR₃, then R_1 is not hydroxyl [BN], methyl, ethyl [DO], substituted or unsubstituted thioethyl [CA of Supplemental IDS Filed July 14, 1999], benzothiazole [HE], substituted benzopyran [EI], substituted benzopyrrole, substituted benzoxazole, substituted 5-membered heterocycle containing two N and one S heteroatoms [HE], or substituted or unsubstituted phenyl [AC, AA, EB, BM, CH, GB, CN, CL, AN, CC, GF, CA], phenylethyl, naphthyl [CN, GA, GD], pyridyl, thienyl [DM], quinoline [DL], tricyclic ring [DK], aminoethyl [FE, FF], or benzyl [BO];

C. further provided that:

when D is a bond, and n is 2, and R_2 is COOH or phenylbutyl ester, then R_1 is not substituted phenyl [BK, DC], or a substituted bicyclic ring containing two oxygen heteroatoms [DC].

D. further provided that:

when D is a bond, and n is 1-2, and R_2 is a substituted or unsubstituted carbocyclic or heterocyclic ring structure, then R_1 is not substituted or unsubstituted carbocycle [DJ, FD, FG] or heterocycle, or hydroxy;

E. further provided that:

when D is a bond, and n is 1-2, and R_2 is hydroxy, alkoxy, $-SO_2(\text{phenyl})$, $N(R_3)_2$, substituted thio or alkylthio, $-NCO$, $-PO_3(\text{Me})_2$, or $-NCOOC(\text{ethyl})\text{phenyl}$, then R_1 is not naphthalene [HG], ethylene [BB], substituted tricyclic ring [DD], or substituted or unsubstituted phenyl [ED, AJ, GJ, BP, AM, HH, AN, GH, DA, DB, HF];

F. further provided that:

when D is C_1 - C_3 alkyl or hexenyl, and R_2 is hydroxyl, then R_1 is not substituted or unsubstituted phenyl [CA, AE, DI, GG, EC, CA, FI], or benzoimidazole [BE];

G. further provided that:

when D is methyl, and n is 1, and R_2 is cyano or $COOH$, then R_1 is not substituted phenyl [CI];

H. further provided that:

when D is methyl, and n is 1, and R_2 is methoxy or $N(R_3)_2$, then R_1 is not methyl [HC], ethyl [EF], phenylethyl, chloro substituted alkyl [GC, HD], substituted oxirane, substituted aziridine wherein one of the carbons is replaced with an oxygen, substituted or unsubstituted propenyl [CJ], substituted phenyl [CM], benzyl, or trifluoro substituted C_2 - C_3 alkyl or alkenyl;

J. further provided that:

when D is ethyl, and n is 2, and R_2 is hydroxyl or $N(R_3)_2$,
then R_1 is not naphthyl [AG, AH];

K. further provided that:

when D is propyl, and n is 1, and R_2 is methoxy,
then R_1 is not ethylene [EF], cyano substituted ethyl, or
triethoxy substituted propyl;

L. further provided that:

when D is not a bond and at least one of D and R_2
contains at least one S or O, then R_1 is not
methyl [HC, CG, BF] or substituted phenyl [CA, AF, AD, GE,
FC, GG, EJ, BD, FI, AK].

The following IDS references contain biological information
that the Examiner may find relevant for reviewing the subject
matter of the present invention.

AI, BI, BC, BH, CE, CF, EJ, FC - Alzheimer's disease.

GE - Muscarinic antagonists.

EB - Disorders of the eye.

GB, CA, CE, CF, EA, EC, FI - Memory disorders.

BH, BI, DG, DH, DG, EA - Neurodegenerative diseases.

FB - Neuropeptide

BG - neurite outgrowth; nerve damage

GA, BA, BJ - Cerebral ischemia.

EG, BH, BJ, FC - Parkinson's disease.

CG - Headache.

AH - Controlling synaptic transmission.

AL - CNS stimulant.

AG, AH - Treatment of CNS disorders.

DF - Opthamology, neurology, ALS.

Additional references are disclosed herein which refer to species that are to be excluded from the scope of claim 1 by amendment. These additional references are [AI, AL, BA, BC, BG, BH, BI, BJ, CE, CF, CK, DF, DG, DH, EA, EH, FA, FB, GI, HA].

Additional references are disclosed herein which refer to chemical species that are deemed to be cumulative with respect to the relevant references noted above for the proviso species. These cumulative references are grouped by relevant proviso as follows.

HB - Proviso B.

DN - Proviso D.

CB - Proviso H.

The Examiner is respectfully requested to cite the documents listed on the attached Form PTO-1449 in the next Office Action. In so doing, the Examiner is respectfully requested to initial in the space adjacent to the listing of each document on the Forms PTO-1449, and return a copy of the initialed Form PTO-1449 with the next communication to Applicants, to confirm that these documents have been considered by the Examiner and made of record in this

application.

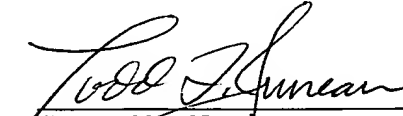
If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned attorney.

Respectfully submitted,

NATH & ASSOCIATES

Date:

October 8, 1999



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